**The Learning Perspective**

**Objectives**

**Describe and evaluate the cultural context and development, the conceptual framework, the methodology, and the application of the learning model.**

It was developed in the United States in the ‘50s. It was a firm contrast to Freud’s psychoanalytical concepts because it relied solely, utterly, and firmly on empiricism (experimental method). *See “Key concepts/Ideas” and “Key theorists and their contributions”*

**Describe and evaluate theories and empirical studies within this perspective.**

*See “Key theorists and their contributions”*

**Explain how cultural, ethical, gender, and methodological considerations affect the interpretation of behavior from a learning perspective.**

The different learning styles of people, cultures, and genders can affect interpretation of a behavior as some might not respond to the reward or punishment. Genders and cultures could also respond differently to a stimulus or have different reactions to the stimulus making the results of a generalized study unclear. Likewise, different cultures value and fear different things. If a culture or a certain gender is taught to fear something it will probably be easier to develop a phobia to it and be harder to rid a person of that phobia.

**Compare theories, empirical studies and the conceptual framework of this model with the other perspectives.**

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| --- | --- |
| **Learning** | **Psychoanalytical** |
| People develop their behavior through conditioning with stimuli, rewards, and punishments | People develop through their developmental sexual stages |
| Learning focuses on behavior influenced by the environment | Psychoanalytical focuses on behavior with achieved or unachieved psycho-sexual stages |
| Focuses on the experimental method and observable behavior to collect data | Uses case studies |
| Dreams are not empirical | Dreams important in analysis |
| Only focuses on reason for simple behavior and some predictive value of behavior | Mainly used for therapeutic purposes |

**Identify and explain the strengths and limitations of learning theory explanations of behavior.** *See “Strengths and weaknesses”*

**Explain the extent to which free will and determinism are integral in this perspective.**

The learning perspective is a very deterministic science. Actually, this is one of the main assumptions of behaviorism. Behaviorists believe that all behavior is trained, conditioned, reinforced, and essentially reflexive. Hence, free will is basically impossible if looked at through the lens of a true behaviorist. This is because behaviorists are considered to be reductionists: reducing everything down to only observable behavior. Is this a strength or weakness?

***Explain the extent to which learning can be explained by alternatives to traditional behaviorist approaches.***

***Assess the extent to which cognitive, biological, and environmental factors contribute to explanations of behavior within the learning perspective.***

**Assumptions**

* Empiricism (The view that experience is the only source of knowledge.)
* Determinism (The philosophical doctrine that every state of affairs, including every human event, act, and decision is the inevitable consequence of antecedent states of affairs.)
* Parsimony (In learning perspective they are all the things that can be seen, behaviorists do not infer, they observe.)

**Key Concepts/Ideas**

* Animals can be conditioned to perform any behavior
  + Operant conditioning and classical conditioning.
* Social learning theory introduced *insight, latent learning, and models.*
* Insight: When, after encountering a problem for some time, new ideas arise in order to develop a solution.
* Latent Learning: Concepts may be learned but not used until reinforcement is introduced.
* Models: Subjects learn from watching other people and copying observable behavior.

**Key Theorists and Their Contributions**

**Ivan Pavlov**: first experimenter to research classical conditioning. In what started as a simple, physiological experiment with a dog, turned out to be the discovery of what we call classical conditioning.-He was performing various experiments on a dog, and found that he could “condition” the dog to salivate at the sound of a bell. Eventually, after repeatedly ringing a bell and introducing food, the bell alone was sufficient to make the dog drool.

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**James Watson:** pioneering theorist that translated the concept of Pavlov’s classical conditioning to humans. -His famous work is referred to as the **little Albert experiment**. He conditioned little Albert to reject white fluffy things by continually including LOUD NOISES upon the introduction of the white fluffy thing. Soon enough, the fluffy white thing alone would make little Albert upset. This research introduced the idea of stimulus generalization. Not only the white bunny (for example) would scare the baby, white fluffy pillows, etc could also raise fear from Albert. Watson was confident that any child could be turned into anything (criminal, business man, etc.) if placed in the corresponding environment.

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**B.F. Skinner:** new aspect of behaviorism. **Operant Conditioning** is very similar to classical conditioning with the major difference being the introduction of reinforcement. After a response occurs, due to a certain stimulus, reinforcement (positive or negative) are introduced that will increase or diminish the probability that the behavior may occur again. -His famous work is the **Skinner box** where he would condition pigeons, mice, and even his own daughter to learn anything that he desired.

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**Bandura** gave us the concept of Social Learning. With the help of the “bobo” doll experiment he showed us how there can be latent learning that is not seen until a reinforcer is included. Young children learned to either hit, or not hit a “bobo” doll, but only the ones that saw the “model” receive no reinforcement or positive reinforcement for beating up the doll actually engaged in that activity. He also came up with the concept of **insight learning** which dealt with monkeys finding ingenious ways to arrive at a solution (getting a banana).

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**Attitude Towards Determinism**

Behaviorism thoroughly embraced the idea of determinism. Key researchers such as Watson, and Skinner believed that the environment could be changed to mold an individual to behave in any way they please. In the words of James Watson “give me five babies and I’ll make one a businessman, one a cook, one a football star, one an actor, and the other a criminal. The definition of determinism is: *the philosophical doctrine that every state of affairs, including every human event, act, and decision is the inevitable consequence of antecedent states of affairs.* Behaviorism states that everything is learned through interaction with our environments. Thus, determinism is a key idea. It happens to be one of the learning perspective’s main assumptions.

**Methods Used**

* Experimental – scientific method
* Observation – direct and effect
* Interview – surveys etc.
* Verbal Protocol – thinking aloud

**Applications:**

**Application of classical learning**

One example of classical conditioning in use is in animal training. Pet trainers today mostly use classical conditioning to train animals, as it is more humane than previous methods. Many trainers use a small clicking device that they click while giving the animal a treat. That animal then associates the clicking sound with the treat, much like Pavlov’s dogs.

<http://www.wagntrain.com/OC/>

Advertising serves as another example of classical conditioning. In most cigarette and beer advertisements, you see young people having a good time at a party or half dressed on a beach. The potential consumers began to associate the happy feeling with the product. This also works with happy jingles and songs in commercials. (I love fishes ‘cause they’re so delicious... Didn’t that make you want to go eat some goldfish? )

http://www.as.wvu.edu/~sbb/comm221/chapters/pavlov.htm

**Application of operant learning conditions**

These sites explain what operant conditioning is (using it for positive or negative reinforcement, etc.).

<http://chd.gse.gmu.edu/immersion/knowledgebase/strategies/behaviorist/OperantConditioning.htm>

http://www.dushkin.com/connectext/psy/ch06/appofoc.mhtml

**Both:**

<http://www.uwm.edu/People/vaishali/psych205/environ4.html>

**Ethical Considerations**

        Their choice of method - especially verbal protocol

        Confusion of the participant

        Cultural difference between participant and observer

        Behavior that the participant’s culture may deem as normal, might be considered unusual by the observer’s, or vice versa.

        Gender issues

        Learning styles

        Right to withdrawal

        Experiments that require intrusive devices (cutting of the corpus callosum) make it difficult for the participant withdrawal afterwards

        Deception (of the participant)

**Evaluation of Strengths and Weaknesses**

***Weaknesse****s*

* Does not account for acquisition of first language
* Does not account for random behavior
* Does not account for interaction between people

***Strengths***

* Strictly empirical using scientific method as means of information
* Applicable to training simple animal and human behaviors
* Gave information about insight in all animals
* Methods could be used in school to teach students

**Web Links**

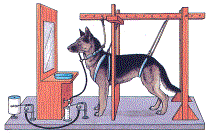
<http://www.revision-notes.co.uk/revision/66.html>

<http://www.revision-notes.co.uk/IB/Psychology/>

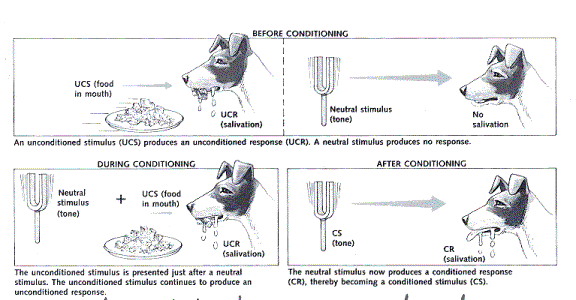
<http://web.isp.cz/jcrane/Psych1/LearningRev.html>

**Methods:**

Method used in this perspective can include experimental, and observational. The methods show the role of the environment on behavior.

Pavlov’s dogs (Ivan Pavlov): Pavlov found that by ringing a bell and then immediately giving the dog some food, the bell came to evoke the same response as the food itself-salivation. First the unconditioned stimulus was presented to the dogs (Food). This would then be followed by an unconditioned response (salivation). Pavlov then noted that learning is based on forming a connection between stimuli. In this case he added a neutral stimulus (bell). At the beginning the bell had no effect on salivation. After the dog associated the bell with the food, the bell became the conditioned stimulus, and the salivation of the dog became the conditioned response.

http://cwx.prenhall.com/bookbind/pubbooks/feldman4/chapter1/destinations1/deluxe-content.html#



Watson and Rayner (1920) (Little Albert): Taught a young boy named Albert to become afraid of a gentle white rat. At the beginning of the study, Albert was unafraid of the white rat and played freely with the animal. While Albert was playing with the rat Watson would create a loud noise behind the child’s head (smashing two bars together). Albert was startled and began to cry. Thereafter, he avoided the rat and would cry whenever it was brought close to him. In Pavlovian terms, a bond had been established between the sight of the rat (CS) and the arousal of Albert's autonomic nervous system (CR). Once this Stimulus-Response bond was fixed, fear could also be elicited by showing Albert any furry, white object. This is referred to as stimulus generalization. Stimulus generalization is defined as the tendency to make the same response to two similar stimuli.

http://web.umr.edu/~psyworld/classical\_conditioning.htm

**Applications:**

       One special and very powerful example of classical conditioning is **taste aversion**. Taste aversion is a case where an organism learns to have an aversion to the taste or smell or other characteristics of some food or drink. For example, after consuming too much alcohol, it’s not unusual for someone to associate the smell or even sight of the alcohol with the sickness that resulted from consuming the alcohol.

      Another application of classical conditioning is found in advertising. For example, many beer ads prominently feature attractive young women wearing bikinis. The young women (Unconditioned Stimulus) naturally elicit a favorable, mildly aroused feeling (Unconditioned Response) in most men. The beer is simply associated with this effect. The same thing applies with the jingles and music that accompany many advertisements.

**Ethical issues about methodology:**

There are several ethical issues that are brought up with the methodologies used in this perspective. The use of human subjects in certain experiments is one of them. Two examples of this are:

         John B, Watson: “Little Albert” Classical conditioning. He conditioned Albert to be afraid of white fluffy objects. He did not do anything to discontinue this phobia.

         Skinner used his own daughters in some of his methods.

**Strengths**

         Scientific method used/Validity of results/Falsifiable data.

         This perspective explains simple behaviors present in organisms.

         This perspective can be properly applied, to humans, animals, to alter or change unwanted behaviors.

**The Learning Perspective**

**Historical background**

As with most approaches in psychology we can find the origins of the learning perspective in Ancient Greece. The influence of environment/nurture is one of the basic thoughts expressed in the learning perspective. The discussion about nature vs. nurture continues today and conforms with the idea of **dualism** (man consists of a soul and a body that can be studied separately) which was of particular interest to the French philosopher *Descartes*. The turn of the 20th century is where we find a major influence on the learning perspective. At this time psychology tended to use either the experimental study or the introspective analysis. However both of these had major limitations. This prompted William James to develop the idea of functionalism (psychology should focus on how behavior relates to its purpose). This leads us to **parsimony**: one of the basic assumptions of the learning perspective. Parsimony states that research should seek the simplest possible explanation for any event. If we use this point of view we can also say that the learning perspective was a reaction to introspection making it also a reaction to psychodynamics.

***Basic assumptions***

The main idea of the learning perspective is the relationship between the environment and behavior. The learning perspective does not pay much attention to internal invents such as biological or cognitive processes. Due of the concept of **parsimony** this perspective studies processes that can be observed directly and simply. Since the learning perspective concentrates on explanations of how human learns, this perspective pays particular attention to the concept of associationism. This supports the idea that humans learn by associating and making connections between ideas and events.

*Learning: changes in behavior as a result of experience.*

***Key researchers:***

        Classical conditioning (mainly represented by Ivan Pavlov and John B. Watson)

        Operant conditioning (mainly represented by B.F Skinner and Edwin Lynn Thorndike)

        Social learning (mainly represented by Albert Bandura)

**Ivan Pavlov (1849 – 1936)**

A Russian physiologist, he earned the Nobel Prize in 1950 with his work on digestion. But his empirical study of reflexes and conditioning are what became influential for behaviorism (the leaning perspective). His work describes the basic rules of what is called classical conditioning (the approach that explains learning as being a reflex response to a stimulus).

Unconditioned responses are those reflexes that already exist in all organisms, and an unconditioned stimulus is the stimulus that elicits a specific response. (a dog salivates (UR) when food is presented (US)). But what Pavlov discovered was that through conditioning he could train his dogs to salivate when a neutral stimulus such as the sound of a bell was presented. This is because when the NS is presented with the US the dog learns an association between the bell sound and the food. So eventually the dog will salivate whenever it hears the bell sound because he would associate the sound of the bell with being fed. In this case the NS (the bell sound) will become a conditioned stimulus (CS) and the salivation will be the conditioned response (CR).

Pavlov concluded that the UR are innate whereas the CR are learned through experience. And this process in which a NS becomes a CS through conditioning has become known as classical conditioning.

<http://arbl.cvmbs.colostate.edu/hbooks/pathphys/digestion/misc/pavlov.html>

**John B. Watson (1878 – 1958)**

Watson is known as the founder of behaviorism. He initially studied introspection but ended up finding this approach to be excessively vague for psychology, especially in his work on mental processes. In one of his major works (Behaviorism (1930)) he promotes his ideas, which he often tested using his own children. He also focused on ideas affecting child rearing. One of his famous quotes is “give me a dozen healthy infants, well formed, and my own specified world to bring them up in and I’ll guarantee to take any one at random and train him to become any type of specialist I might select – doctor, lawyer, artist, merchant-chief and yes even beggar man and thief, regardless of his talents, penchants, tendencies, abilities, vocation and race of his ancestors.”

<http://www.redeemer.on.ca/~psychist/behavioral_psych/Watson/Watson.htm>

**Edwin Lynn Thorndike (1874-1949)**

He studied psychology at Harvard University under William James, but was forced to transfer to Columbia University because of financial difficulties. He studied problem solving on animals using a series of puzzle-like tasks. One of his famous experiments on problem solving involved a cat confined in a box from which it could release itself by pressing a lever. From these studies he published his book “Animal Intelligence”. He also came out with the *law of effect* (any response which leads to an outcome that is satisfying to the organism is likely to be repeated). This was a form of learning close to associationism, because it focuses on the fact that response and consequence must be closely linked together.

[muskingum.edu/~psychology/psycweb/history/thorndike.htm](http://muskingum.edu/~psychology/psycweb/history/thorndike.htm)

**B.F Skinner (1904-1990**)

He can be classified as the best known American behaviorist, and the founder of operant conditioning. He taught at two Midwestern universities during WW II. He conducted military research including a program designed to teach pigeons to direct missiles to targets. He is most well known for developing operant conditioning. He did many animal studies similar to Thorndike but was influenced by Watson. He became famous for studies using the “Skinner Box” which he developed while studying learning in rats*.* In this experiment he discovered that for learning to occur it requires extensive practice. This led him to conclude that frequency of response is the standard measure of operant learning. This can be criticized in many ways: operant conditioning involves a unique set of assumptions. Furthermore, it is based on reinforces and reinforcement.

<http://www.ship.edu/~cgboeree/skinner.html>

**Albert Bandura (1973)**

He was one of the theorists who concentrated more on social learning theory rather than cognitive psychology or other learning perspective theories. He mainly worked with aggressive behaviors in children. He focused more on the idea that environment can affect the behavior but also behavior can affect the environment. His work strongly demonstrates model learning and how children can learn their behaviors by watching adult behavior. His famous work done in this area is the “bobo” doll experiment. This study used aggressive behavior of adults shown to children in order to determine if children are more likely to repeat the behavior when the adult was praised or punished for this behavior. This experiment made him one of the pioneers of social learning theory.

<http://www.ship.edu/~cgboeree/bandura.html>

***Attitude towards determinism***

The learning perspective view towards behavior does not support determinism. As we already know determinism is the idea that our behavior is innate. In most cases it is believed that our behaviors are something we are born with so we do not have to learn them, they just develop in us. One example of a perspective that supports this idea will be the biological perspective, since it focuses more on how biological processes dictate our thinking and behavior. But in the learning perspective, we can argue that it does not support the idea of determinism in any way since it focuses on how we learn our behaviors. *Learning= changes in behavior as a result of experience.* The learning perspective focuses on how the environment takes control over our learning. We can see this in Bandura’s social learning theory as well as in classical conditioning and operant conditioning.

Social learning theory looks at how children learn their behavior by modeling adults or other social models. In classical conditioning we look at how stimuli from the outside can influence our behaviors. And in operant conditioning we see how we are likely to perform certain behaviors depending on their outcomes.

Therefore, we can conclude that social learning theory does not support the position of determinism for human behaviors.

***Weaknesses***

From the description of this perspective we can understand that the learning perspective is manly based on the idea of looking at the interactions between an organism and its environment. But because this perspective concentrates too much on analyzing what we can see from the outside it lacks to study consciousness and internal subjective states. Some critics say that treating the organism like a black box means that one ignores the mental processes that are central to human behavior. But many behaviorists responded to this by simply saying that such events are scientifically unknowable, and in any case do not cause behavior. But today we know that these things are scientifically knowable due in part to advanced technologies such as the CAT scan, etc… to investigate what is happening inside the organism and may dictate some of our behaviors. The learning perspective does not believe that behavior is determined, but by ignoring internal biological processes because we are unable to see them does not necessary mean that they don’t exist. Likewise, in cases where the root of the problem is brain damage or some damage in an organism, the cause of the abnormal behavior can’t be fully described by the learning perspective. On the other hand, we can also argue that many of the experimental methods that are used in the research of the learning perspective are based on animal research so we can’t generalize the results that we get for a rat to a human. Many of the weaknesses of this perspective are based on the fact that the learning perspective focuses too much on the idea of parsimony.

**Terms to know/Vocabulary with definitions**

**Generalization** - The tendency of a new stimulus that is similar to the original stimulus to produce a response that is similar to the conditioned response.

**Discrimination** - The process of learning to respond to certain stimuli and not to respond to others.

**Extinction** - The weakening of the conditioned response in the absence of the unconditioned stimulus

**Stimulus Substitution** - Pavlov’s theory of how classical conditioning works; the nervous system is structured in such a way that the CS and the US bond together and eventually the CS substituted for the US.

**Information Theory** - Contemporary explanation of why classical condition works; key to understand classical conditioning focuses on the information an organism gets from the situation.

-(E. C. Tolman, 1932) - The organism used the CS as a sign or expectation that a US will follow.

**Phobias** - Irrational fears

**Counterconditioning** — A procedure for weakening a CR by associating the fear-provoking stimulus with a new response incompatible with the fear.

- (Mary Cover Jones, 1924) — Eliminated fear in 3 year old.

**Operant Conditioning**-Form of learning in which the consequences of behavior produce changes in the probability of the behavior’s occurrence.

**Law of Effect** — Behaviors followed by positive outcomes are strengthen, whereas behaviors followed by negative outcomes are weakened. - The correct stimulus-response association strengths and the incorrect association weakens because of the consequences of the organism’s actions - Organism’s behavior is due to a connection between a stimulus and a response.

**Reinforcement** (reward) - A consequence that increases the probability that a behavior will occur

**Positive Reinforcement** - The frequency of a response increases because it is followed by a stimulus

**Negative Reinforcement** -The frequency of a response increases because the response either removes a stimulus or involves avoiding the stimulus.

**Punishment** -A consequence that decreases the probability that a behavior will occur.

**Time Interval** - The interval between response and reinforcement.

(Holland, 1996) - Learning is more efficient under immediate rather than delayed consequences.

**Shaping** - The process of rewarding approximations of desired behavior.

**Chaining** - Technique used to reach a complex sequence, or chain or behaviors. The procedure begins by shaping the final response in the sequence. Then you work backward until a chain of behaviors is learned.

**Primary Reinforcement** - Involves the use of reinforces that are innately satisfying, that is they do not take any learning on the organism’s part to make them pleasurable.

**Secondary Reinforcement** - Acquires its positive value through experience; secondary reinforces are learned or conditioned reinforces.

**Fixed-Ratio Schedule** - Reinforces a behavior after a set number of responses.

**Variable-Ratio Schedule** -A timetable in which responses are rewarded an average number of time, but on an unpredictable basis.

**Fixed-Interval Schedule** -Reinforces the first appropriated response after a fixed amount of time has elapsed.

**Variable-Interval Schedule** — A timetable in which a response is reinforced after a variable amount of time has elapsed. -The closer the schedule is to continuous reinforcement, the faster the individual learns. However, once behavior is learned, the intermittent schedules can be effective in maintaining behavior.

**Extinction** — A previously reinforced response is no longer reinforced and there is decreased tendency to perform the response.

**Generalization** —Giving the same response to similar (but different) stimuli.

**Discrimination** — The tendency to respond only to those stimuli that are correlated with reinforcement.

**Observational Learning** — (aka imitation or modeling) Learning that occurs when a person observes and imitates someone’s behavior.

**Cognitive map** — An organism’s mental representation of the structure of physical space.

**Insight learning** — A form of problem solving in which the organism develops a sudden insight or understanding of a problem’s solution

**Taste aversion** —if an organism ingests a substance that poisons but does not kill it, the organism often develops considerable distaste for that substance.

**Learning** — A relatively permanent change in behavior that occurs through experience.

**Classical Conditioning** -A neutral stimulus becomes associated with a meaningful stimulus and acquires the capacity to elicit a similar response.

**Reflexes** — Automatic stimulus-response connections.

**Unconditional Stimulus** (US) — A stimulus that provides a response without prior learning.

**Unconditional Response** — (UP) — An unlearned response that is automatically elicited by the US

**Conditioned Stimulus** (CS) — Previous neutral stimulus that eventually elicits the condition response after being associated with the unconditioned stimulus.

**Conditioned Response** (CR) — Learned response to CS that occurs after CS-US paring. (Pavlov, 1927)

-(DeCola & Fanselow, 1995) — The interval between the CS & US is one of the most important aspects of classical conditioning

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